

VII INTERNATIONAL ACTIVITIES RELATED TO THE NATION'S ECONOMIC INFRASTRUCTURE

Many of the Commerce programs supporting the Nation's economic infrastructure have international aspects. The major international activities are cited below, in the context of Theme I goals.

- A. Implement the President's National Export Strategy in conjunction with the Trade Promotion Coordinating Committee,
- B. Enforce U.S. trade laws and agreements to promote free and fair trade, and
- C. Strengthen and institutionalize trade advocacy efforts, placing special emphasis on the "Big Emerging Markets (BEM)" and major projects.

ITA offices in 70 countries are staffed by commercial officers and foreign service nationals who develop and analyze information on foreign markets and represent U.S. business interests abroad. ITA: (1) identifies trade opportunities for U.S. businesses and products; (2) counsels U.S. business, including sources of trade finance; (3) identifies potential overseas representatives for U.S. firms; (4) develops market research and analysis of trade policy issues; (5) advocates on behalf of U.S. company interests in major projects, procurement, and market access issues; and (6) organizes and manages U.S. trade promotion events.

ITA continues to emphasize trade with the Big Emerging Markets (BEMs) which present exceptional opportunities for U.S. exporters. Advocacy efforts (including trips by Cabinet and Sub-Cabinet officials) have been instrumental in promoting U.S. exports in the BEMs, where clear rules and bid processes are often lacking. To further our relations with the BEMs, U.S. policy makers have concluded agreements with a number of BEMs as well as the NIS to form Business Development Committees and Joint Commissions — cornerstones of ITA's support of the Department's BEMs Initiative. At the same time, ITA can emphasize trade with the BEMs, without losing focus on mature markets — major trade promotion initiatives aimed at increasing the number of U.S. firms exporting to traditional markets, e.g., "Showcase Europe", "Canada First", and the Trans-Atlantic Business Dialogue.

- D. Restructure export controls for the 21st century,
- E. Maintain a fully effective law enforcement program to protect U.S. national security, foreign policy, nonproliferation of dual-use commodities, counter-terrorism, nonproliferation of chemical and biological weapons, and public safety interests, and
- F. Facilitate transition of defense industries.

BXAs activities are essentially international in scope, and encompass all three of these goals.

BXA has taken a lead role in increasing the effectiveness of multilateral control regimes by limiting the scope of U.S. unilateral controls, and concentrating greater attention on effective implementation/harmonization of multilateral non-proliferation control regimes. BXA represents U.S. industry in international efforts to strengthen the Biological Weapons Convention. The U.S. will play a key role in developing policy and implementation plans for the Chemical Weapons Convention (CWC) treaty, especially in the area of commercial facility inspection procedures. BXAs program implementation role provides the U.S. chemical industry with a voice in the development of policies that affect that industry.

BXAs Export Enforcement function reviews export transactions to ensure the “bona fides” of end-users and end-uses. It also works cooperatively with foreign export control officials on export enforcement issues. Export Enforcement also has worked with several countries of the Former Soviet Union (FSU), Central Europe, and East Asia to implement the enforcement arms of their own export control programs. Finally, BXA has export control staff in some Central Europe and East Asia U.S. Embassies, to work with Embassy staffs and host governments on enforcement-related issues.

Export control cooperation includes technical exchanges between U.S. export control officials and their foreign counterparts. These exchanges, which take place both within the U.S. and foreign countries, cover the full range of export control infrastructure development and implementation including: legislation and regulations, licensing processing and procedures, preventive practices, industry-government relations, and systems automation and administration. The result of these activities is to establish a comprehensive and effective export control capability in each country.

BXA is participating in the development of a unified strategy to begin consultations with our allies on offsets in defense trade, as mandated the October 1996 TPCC report. BXA plays a major role in discussions to build key management infrastructure that will support both electronic commerce and public safety needs.

G. Strengthen the public's understanding of the U.S. economy and its competitive position by improving Gross Domestic Product (GDP) and other national, regional, and international economic accounts data.

BEA's participation in international standards-setting organizations helps bring uniformity and higher quality to the international statistical system, which improves the U.S. Government's ability to assess and compare economic developments. Examples of these activities are the United Nations' System of National Accounts and the International Monetary Fund's Balance of Payments Manual. With the implementation of new standards, U.S. measures of economic growth, investment, and trade will be more comparable to those in other nations and will better reflect new and rapidly growing sectors, increased globalization of production and investment, and other features of today's and tomorrow's economy.

The present Standard Industrial Classification (SIC) system — the one on which BEA's GDP and other key accounts data are classified — presents an outdated picture of the organization of economic activity. Work on the North American Industry Classification System (NAICS) was begun in 1992 under OMB and carried forward with our Canadian and Mexican NAFTA partners' statistical agencies. The design of the new system is now complete and it will replace the outdated SIC system in 1997. BEA will work with the Census Bureau and the Bureau of Labor Statistics to oversee the introduction of NAICS in the U.S. and the integration into the accounts of the new data collected using NAICS.

Increased integration in world markets for goods, services, and capital, in combination with major advances in computer and communications technology, have resulted in large gaps in BEA's coverage of international transactions. In recent years, BEA has been closing gaps in coverage through data exchanges with other countries' statistical agencies and with foreign central banks. Efforts to reconcile import and export statistics of other countries with our own have improved U.S. trade data.

BEA, Treasury, and the Federal Reserve System — in cooperation with the International Monetary Fund, the Organization for Economic Cooperation and Development, the Bank for International Settlements, and the other G-7 nations — are working to agree on common definitions to use in collecting consistent data on portfolio investments. Participating countries will modify their data collection systems to improve consistency and fill existing gaps in coverage by exchanging data with each other.

I. Stimulate the creation of private sector jobs through the growth of industry and the retention or expansion of existing businesses in economically distressed areas.

EDA's primary focus is the United States, but assistance is also provided, by legislative mandate, to the Commonwealth of Puerto Rico, the Virgin Islands, the Commonwealth of the Northern Mariana Islands, American Samoa, Federated States of Micronesia, the Republic of the Marshall Islands, and Guam. In addition, EDA provides assistance to communities in the U.S. that seek to create export-related opportunities.

K. Provide new knowledge, analysis, and technical information which serve both to assess economic development problems and to mobilize non-Federal resources for their solutions at the local level.

Technical assistance to domestic communities has been limited primarily to export related activities. For example, EDA awarded Local Technical Assistance grants to the City of Vineland, NJ to develop a domestic and export marketing program. EDA provided assistance to TradePoint USA in Columbus, OH to establish a Central Ohio Export Development Program of on-line information and training in export management for small and medium sized businesses. EDA also helped the Atlanta Paralympic Organizing Committee forge long-term relationships between the U.S. manufacturers of assistive products and the policy and procurement decision makers in emerging international markets.

The Trade Adjustment Assistance Program helps client firms conduct international market research, comply with foreign safety and performance requirements, and develop capacity to meet ISO-9000, ISO-14000 and other foreign standard requirements.

L. Improve opportunities for minority-owned businesses in major growth industries according to geographic demands, and

M. Improve the opportunity for minority-owned businesses to pursue financing.

Contributions of minority businesses toward America's competitiveness in the global marketplace are important. In improving opportunities for minority-owned businesses, MBDA seeks to assist these businesses to participate actively in the global marketplace and contribute to the U.S. competitiveness. MBDA supports this endeavor through "matchmaker" trade missions with ITA that allow minority businesses to expand their market base internationally.

N. Provide technical leadership for the Nation's measurement and standards infrastructure, and assuring the availability of needed measurement capabilities.

NIST provides leadership in harmonizing international measurements and standards to facilitate international trade. Through its measurement and standards-related services, NIST promotes market efficiencies that provide the means for assessing and demonstrating conformance and for resolving technical disputes. These efforts are especially important for international trade, where technical trade barriers have arisen.

NIST is helping to develop Mutual Recognition Agreements that specify conditions under which testing for conformance with foreign and international standards can be done within the U.S.

In 1994 NIST established a National Voluntary Conformity Assessment System Evaluation Program to evaluate and recognize U.S. testing laboratories, accreditors, certifiers, and quality assurance organizations with demonstrated competence in determining whether products satisfy foreign regulatory requirements.

NIST activities have been formalized by the passage of the National Technology Transfer and Advancement Act (PL 104-113), where Congress has directed NIST to take responsibility to provide public sector leadership in standards and conformity assessment and in working cooperatively with other government agencies and the private sector to support the creation and maintenance of a sound technical infrastructure for the U.S. NIST is in a unique position to provide coordination and policy input for standards and conformity assessment structures and activities in the U.S. and lead the development of a realistic, workable technical infrastructure to support the goal of an effective global market.

S. Help protect, promote, and expand intellectual property rights systems throughout the U.S. and abroad.

The PTO will continue to play a pivotal role in intellectual property rights policy development both at home and abroad. In cooperation with the Office of the U. S. Trade Representative, the State Department, and ITA, the PTO will participate in efforts to improve international standards for the protection of intellectual property. PTO participates actively in WIPO regarding agreements to improve protection for patents, trademarks, and copyrights. Examples of current activities include the Trademark Law Treaty, the Patent Law Treaty, the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty.

PTO will continue to collaborate with the EPO and the JPO on activities leading to enhanced dissemination of patent information, and shared information on best practices and experiences in processing patent applications and automating systems. PTO also will be working more closely with regional organizations, such as the Asia-Pacific Economic Cooperation (APEC).

U. Advocate international telecommunications policies that will help open international markets and promote the interests of the U.S.,

V. Set policies for efficiently and effectively managing the Federal use of the radio spectrum, and prepare for international radio spectrum-setting conferences of the ITU, and

W. Provide leadership in developing telecommunications policy initiatives in emerging areas of national priority.

NTIA represents the U.S. in all international frequency allocation and standards setting conferences. NTIA promotes development of the Global Information Infrastructure through reduction of regulatory barriers to trade and through bilateral and multilateral negotiations.

Through the Global Electronic Commerce program, NTIA leads discussions with our trading partners regarding the development and implementation of international privacy policies which both protect privacy and support the broadest flow of data over the Internet.

X. Promote safe navigation by revolutionizing U.S. marine and air navigation, mapping, and surveying; assist commercial shipping in moving increased cargoes safely and efficiently; and provide a precise satellite-derived reference system as the basis for the nation's geographical positioning needs.

Ninety eight percent of our international trade, valued at nearly \$500 billion annually, moves through U.S. ports. Real-time water level and current information is needed for safe navigation and to permit increased exports by maximizing use of limited channel depths. Expansion of foreign markets and increased American exports are supported by assuring harbor and airport operations are safe and efficient. NOAA's international leadership in geographical spatial technology will help industry develop markets in Global Positioning equipment and Geographical Information Systems software.

Y. Provide significantly improved short-term warning and forecast products and services that enhance public safety and the economic productivity of the nation by enhancing the ability to observe, understand, and model the environment, and effectively disseminating products and services to users.

NOAA is an international leader in environmental science and technology. NOAA programs advance the interests of the U.S. meteorological, hydrological, geographic and oceanographic communities by accessing international resources and providing vital and timely data for aviation and transportation safety, as well as developing markets for weather forecast technologies and related specialized equipment, software, and systems. Through its international leadership, NOAA advances its mission in cost-effective ways.

The National Weather Service's International Activities Program advances the interests of the U.S. by improving the levels of science, technology, operations and services, which enhance short-term warning and forecast services. As an international leader in scientific research and operational weather forecasting, NOAA's Tropical Prediction Center has been designated as the World Meteorologist Organization Regional Specialized Meteorological Center for tropical storm warnings in the Atlantic and Pacific oceans. In addition, NOAA provides vital timely and accurate data for the aviation industry by supporting the satellite dissemination of the World Area Forecast System data and products.

VIII

EXTERNAL FACTORS, AND CURRENT TRENDS AND ISSUES AFFECTING COMMERCE ACTIVITIES SUPPORTING THE NATION'S ECONOMIC INFRASTRUCTURE

All of Commerce's programs supporting the Nation's economic infrastructure must operate in the real world, and must be aware of outside events which will have impacts on them. Major trends and challenges are cited here, in the context of Theme 1 goals.

- A. Implement the President's National Export Strategy in conjunction with the Trade Promotion Coordinating Committee,
- B. Enforce U.S. trade laws and agreements to promote free and fair trade,
- C. Strengthen and institutionalize trade advocacy efforts, placing special emphasis on the "Big Emerging Markets" and major projects.

ITA has developed a comprehensive, government-wide strategy to meet foreign competition and ensure U.S. companies and workers are able to take advantage of the trade agreements the U.S. has concluded. This strategy includes identification of obstacles to U.S. exports (including failure of foreign governments to implement or comply fully with trade agreements) and plans for removing such obstacles, and marshalling U.S. government resources to eliminate barriers. ITA examines promotional issues — trade finance, advocacy, and efforts to help small business — from the perspective of our competitors, and improves its approaches accordingly for U.S. companies. ITA has also looked ahead to a new frontier of strategic commercial policy issues — bribery and corruption, standards, technical assistance and offsets — which must be addressed now if our firms and workers are to be at the forefront of the world economy in the future.

The world economy continued to grow at a moderate rate at the time this Strategic Plan was being prepared. Estimated world economic growth was at about the same level as the previous year, below potential in the industrial countries as a group, and disappointing in the European Union. In the near term, world growth is expected to accelerate, with a rebound in European growth leading the way. Continued good economic performance in most developing regions and further recovery in the transition economies are also expected.

During the last decade U.S. exports have grown at a rate more than five times higher than the economy as a whole, and export growth accounted for fully one-third of total U.S. growth in the decade. The total number of U.S. jobs supported by exports continues to increase strongly, and wages in export-related jobs averaged more than overall U.S. wages.

While U.S. exports and the jobs dependent on them are growing at a healthy rate, and are projected to continue to outperform the economy as a whole, the overall U.S. trade position has deteriorated in recent years. Since the recession year of 1991 when the U.S. goods and services trade deficit fell, the deficit has grown in each of the last three years.

The U.S. trade deficit is projected to increase somewhat in 1997, but should begin to decrease as U.S. economic growth slows to long term trend levels, the rate of growth of imports decelerates, and economic growth picks up in other industrial countries. Nevertheless, trade deficit levels are unlikely to return to the low levels of 1991. Our demand for imports is strong as U.S. firms globalize their production, and foreign producers find our markets very attractive. Thus, if we are to make strides in lowering the trade deficit, our export growth rate must rise above historic levels. Generating exports — and the jobs dependent on them — must continue to be one of our highest economic priorities.

D. Restructure export controls for the twenty-first century,

E. Maintain a fully effective law enforcement program to protect U.S. national security, foreign policy, nonproliferation of dual-use commodities, counter-terrorism, nonproliferation of chemical and biological weapons, and public safety interests, and

F. Facilitate transition of defense industries.

A principal challenge for BXA is achieving a delicate but critical balance between the protection of U.S. national security and foreign policy interests, and combating the proliferation of weapons of mass destruction, without unduly hindering the growth of U.S. exports. In developing these policies, BXA has taken into account such new security concerns as the proliferation of weapons of mass destruction and terrorist activity that have arisen since the end of the Cold War, while supporting the interests of the exporting community.

The end of the Cold War has led to the decontrol of many previously-controlled dual-use commodities. However, they remain subject to licensing, and effective enforcement of the EAA and EAR remain critical. Additionally, BXA's Export Enforcement arm investigates threats to not only the traditional national security, nonproliferation, and foreign policy controls, but also threats posed by terrorists. It will also have enforcement responsibilities under Chemical Weapons Convention implementing regulations and public safety aspects of the Fastener Quality Act.

Since the break up of the Soviet Union, threats to national and global security are increasingly defined in terms of the threat posed by terrorists groups and rogue states possessing weapons of mass destruction. The break up of the FSU shattered the Soviet central economy and military industrial complex, but that

central economy had served as an effective export control system. The democracies that emerged from the old system recognize the threat posed to themselves and the world, but they lack the capacity to develop and implement an effective export control system. The primary challenge now is to convince them to develop a new, equally effective export control system.

G. Strengthen the public's understanding of the U.S. economy and its competitive position by improving Gross Domestic Product (GDP) and other national, regional, and international economic accounts data.

By eliminating non-core programs and reallocating those resources, BEA has made good progress in improving its economic accounts. However, these efforts have not fully offset general concerns over data accuracy and reliability and their ability to measure changes in the economy. These concerns have been raised by both public and private decision makers. Alan Greenspan, Chairman of the Federal Reserve Board, highlighted them in Congressional testimony: "...the list of shortcomings in U.S. economic data is depressingly long. There are biases in aggregate price indexes, incomplete reporting of international transactions, a significant amount of mere interpolation in the service portion of our national income accounts, uneven coverage of the financial accounts of households and firms, and unreported economic activity." In addition, the National Academy of Sciences has released two studies which explore how U.S. systems for collecting and analyzing data have fallen behind the times. The challenge for BEA is to improve GDP and related data so that these yardsticks of economic performance will continue to reflect accurately the ever-changing economy.

H. Improve national and local census and survey data through better business practices and public cooperation.

Two major challenges provide the opportunity to change the way the Census Bureau does business. First, both Congress and OMB have directed that Census 2000 must be simpler, less costly, and more accurate than the 1990 census. Census 2000 must: count every resident, using easy-to-use forms and new ways to respond; follow an open process that diverse groups can support; eliminate the differential count of racial and ethnic groups; and produce a single result that is accurate.

Second, Census 2000 must achieve the highest levels of quality, by ensuring that its products and services meet/exceed customer expectation, and are appropriate for end users.

- I. Stimulate the creation of private sector jobs through the growth of industry and the retention or expansion of existing businesses in economically distressed areas,
- J. Help distressed communities build their capacity to stimulate, maintain, or expand economic growth, and
- K. Provide new knowledge, analysis, and technical information which serve both to assess economic development problems and to mobilize non-Federal resources for their solutions at the local level.

Under EDA's current statutory criteria, 39% of the country, with 34% of the population, is eligible for EDA assistance because of high unemployment, high poverty, or low per capita income. Under eligibility criteria proposed in EDA reauthorization legislation currently under consideration in Congress, almost 38% of the Nation's population would be eligible for assistance because of high unemployment or low per capita income. Recent appropriation levels allow EDA to provide economic development assistance to only a fraction of the distressed communities that are eligible for funding. The challenge to EDA is to provide assistance as efficiently and effectively as possible to address the greatest need with limited resources.

As the Federal government delegates some of its responsibilities — such as resulted from welfare reform — to local communities, the need to build local capacity grows. Planning and local technical assistance to distressed communities is out-paced by the needs of communities to manage the new burdens as well as facing the challenges of an economy that is increasingly technology-based and globally-linked.

NAFTA and GATT/WTO have resulted in increased imports that, in turn, augment significantly the client caseloads for EDA's Trade Adjustment Assistance Program. In addition to greater demand for assistance in restructuring plans and operations, firms injured by increased imports will need more specialized assistance, including assistance in adopting greater technology.

EDA's programs are flexibly designed to enable the agency to address the widespread need for economic development and to target its funds to the most distressed areas of the Nation. An agency analysis determined that 94% of Public Works projects were made to communities with unemployment at least one percent above the national average, per capita income less than 80% of the national average, or both. EDA's support of America's communities is bolstered by a large national network of partnerships with local delivery organizations, including 320 economic development districts that prepare regional economic development strategies, 61 Native American planning districts, 68 University Centers that utilize academic expertise to provide technical assistance to local communities, state and urban planning offices, and 12 independent regional Trade Adjustment Assistance Centers.

L. Improve opportunities for minority-owned businesses in major growth industries according to geographic demands, and

M. Improve the opportunity for minority-owned businesses to pursue funding.

Recent efforts to dismantle federal affirmative action programs provide a serious challenge to MBDA's efforts to improve opportunities for minority-owned businesses. These efforts make it difficult to provide minority entrepreneurs with the unique information and management capacity that facilitate minority business's contributions to America's competitiveness in the global economy, thus threatening the creation of jobs in the general economy, particularly in minority communities, and constraining the minority community from generating substantial Federal tax revenue.

N. Provide technical leadership for the Nation's measurement and standards infrastructure, and assuring the availability of needed measurement capabilities.

A central mission of the NIST laboratory program is to continually improve the U.S. system of measurement needed by industry and science. NIST facilities in Gaithersburg, Maryland and Boulder, Colorado, currently valued at \$3 billion, were built 30 to 40 years ago, and house laboratories that conduct advanced research in areas such as semiconductor electronics, biotechnology, manufacturing engineering, atomic scale physics, computer science, and advanced materials. The combination of advancing age and increasingly sophisticated needs has made NIST's current facilities inadequate for providing U.S. industry with key technology, measurements, and standards in those areas, some of which (microprocessors, lasers, biotechnology, nanomaterials) were undreamed of when NIST facilities were built. NIST facilities lack the high-quality environmental system controls needed to make precision measurements under predictable, stable conditions. The deterioration and obsolescence of the NIST laboratories is a critical issue that must be addressed.

P. Assist U.S. businesses in continuously improving their productivity and efficiency utilizing Malcolm Baldrige National Quality Award framework core values, criteria, and assessment methods.

NIST is the focal point for quality and business performance in the U.S., and is aware that the performance of organizations in health care and education lags that of the Nation's top businesses. NIST has the opportunity to positively impact these fields, while at the same time improving the delivery of both services to the public. Improved performance in these fields would help U.S. businesses as well,

since the cost of health care for employees is a major concern of U.S. businesses and it contributes to the price of U.S. goods and services. Today's workplace increasingly requires multi-disciplinary and technological skills. The health care and education communities see the need for quality improvement and welcome the Baldrige approach. Extending the Baldrige program to these sectors will require that it be adapted to the unique characteristics which make these sectors different from business, and it will require expanded legislative support.

R. Coordinate and lead inter-agency efforts to enhance industry competitiveness in partnership with industry, academia and the states.

The United States Innovation Partnership (USIP) creates a new working relationship between the States and Federal agencies with science and technology missions, to stimulate technology-intensive, state-based economic growth, high quality jobs, and globally competitive businesses by promoting innovation in the American economy. The USIP redefines the Federal/State relationship by changing the Federal science and technology system into a national innovation system. USIP is an interactive partnership to develop a national innovation system that can sustain long-term economic growth and rising living standards for all Americans.

Through the partnership, the States and the Federal government can collectively and more productively address such issues as: streamlining regulatory review of environmental technologies, linking high-tech entrepreneurs and investors through the virtual network on the World Wide Web, making Federal science and technology resources accessible to local governments and inventors, and facilitating electronic commerce and telemedicine.

S. Help protect, promote, and expand intellectual property rights systems throughout the U.S. and abroad.

As American businesses expand their operations across national boundaries, there is a greater demand for global patent and trademark protection. PTO is exploring potential opportunities for enhancing global protection of intellectual property with its Trilateral partners (the European and Japanese Patent Offices) and with the World Intellectual Property Organization.

T. Support the development of a National Information Infrastructure (NII) that will be accessible to all Americans.

Information technology and telecommunications sectors are both dynamic growth sectors themselves, and also engines of development and economic growth in other sectors of the economy. Telecommunications products and services make factories more efficient, speed the creation of new and better goods and services, develop new jobs and markets, and increase trade. A primary goal of NTIA is to support the Administration's intention to make the benefits of the NII available to this Nation's schools, libraries, and other public institutions by the year 2000.

U. Advocate international telecommunications policies that will help open international markets and promote the interests of the U.S.

NTIA represents the U.S. position in all international frequency allocation and standards setting conferences. NTIA promotes development of the Global Information Infrastructure (GII) through reduction of regulatory barriers to trade and through bilateral and multilateral negotiations.

V. Set policies for efficiently and effectively managing the Federal use of the radio spectrum, and prepare for international radio spectrum-setting conferences of the ITU.

The radio frequency spectrum is an extremely limited, but highly sought-after resource. NTIA promotes efficient usage through technical and economic means and promotion of technological innovation. NTIA assesses spectrum usage, identifies areas where spectrum can be shared between government and private sector uses, and identifies spectrum that can be shifted to other priority uses.

W. Provide leadership in developing telecommunications policy initiatives in emerging areas of national priority.

The Internet, developed and made accessible to broad public use a relatively short time ago, has captured the imagination of business and industry, researchers, consumers, and simply curious people in this country and around the world. The use of the Internet literally expands daily as new information is posted and new users come on line. But the astonishing capacity, flexibility, and pervasiveness of the Internet can also allow for improper or restrictive use, and thus the need for protection arises. Initiatives such as the Global Electronic Commerce program are intended to protect users and support consistent domains in this country and overseas.

X. Promote safe navigation by revolutionizing U.S. marine and air navigation, mapping, and surveying; assist commercial shipping in moving increased cargoes safely and efficiently; and provide a precise satellite-derived reference system as the basis for the Nation's geographical positioning needs.

By 2005, merchant ships, naval vessels, fishing vessels, and recreational boats will safely ply our coastal waters, electronically guided by space-based navigation and advanced information technologies. NOAA will revolutionize U.S. marine and air navigation, mapping and surveying and assist commercial shipping in moving increased cargoes through U.S. ports and harbors with unsurpassed safety and efficiency. While maritime navigation will always be hazardous, the new technologies promise significantly to reduce the risk of accidents and spills.

Key factors will influence NOAA's ability to achieve the goal of promoting safe navigation, among these being the rate at which change should occur and the ability of the Federal government to support these changes. Essential Federal roles, including ensuring safety of the public, protection of the environment, and viability of the means to move commerce, must be carried out efficiently. These services are even more vital today than they have been in the past, considering the impacts on transportation, defense, international trade and public works. NOAA must position itself to discharge its responsibilities effectively, while recognizing that: U.S. exports are expected to grow from about 22% of GDP today to over 30% in the year 2000, yet products and services are growing inadequate due to the lack of essential maintenance; productivity gains from new navigation and positioning technology will rapidly change user needs, and; demand for geographic information to guide economic development is increasing.

Y. Provide significantly improved short-term warning and forecast products and services that enhance public safety and the economic productivity of the nation by enhancing the ability to observe, understand, and model the environment, and effectively disseminating products and services to users.

NOAA improves our Nation's environmental prediction and warning capabilities for the safety of life and property. As we head into the 21st century, benefits and service improvements in natural hazard warnings will be realized through enhanced observations and predictions, made possible by the development and implementation of new observing systems, and the development of data crucial to improving warnings and forecasts. These improvements enhance national capabilities to mitigate the impacts of environmental events, to reduce catastrophic impacts of natural disasters, and to improve economic productivity of the Nation.

While NOAA provides the information needed to make informed decisions, the public must understand how to utilize and act on this information. Because the manner in which the public responds to weather information is not under NOAA's control, education and awareness are important keys to successfully achieving the outcome of advancing short-term warnings and forecasts. In addition, NOAA must continue to nurture the unique partnership which exists between the National Weather Service and the private meteorological sector for the provision of weather and climate services to the public and industry. This balance is a fundamental strength of the partnership, and has enabled the private meteorological sector to grow to an over \$200 million industry.